

PB. 5818 - Patenti 2280 HV Rijswijk (ZH) (070) 340 2040 31651 epo nl

FAX (070) 340 3016

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Zeichen/Ref./Réf.

P024056EP: HGH

Anmeldung Nr./Application No./Demande n*.//Patent Nr./Patent No./Brevet n

98946105.8-2105/US9819478

Anmelder/Applicant/Demandeur//Patentinhaber/Proprietor/Titulaire

TRUSTEES OF THE UNIVERSITY OF PENNSYLVANIA

COMMUNICATION

The European Patent Office herewith transmits the partial European search report under Rule 46(1) EPC relating to the above-mentioned European patent application.

Copies of the documents cited in the search report are enclosed.

The applicant's attention is drawn to the following:

The search Division informs the applicant that if the European search report is also to cover inventions other than the invention first mentioned in the claims, a further search fee must be paid for each of these inventions, within ONE MONTH after notification of this communication.

If the application has been filed up to 30 June 1999, the search fee in force before 01 July 1999 (EUR 869,--) or the equivalent applicable on the date of payment is payable. This applies also to the search fees requested under Rule 46(1) EPC. See also OJ EPO 06/1999, 405.

Moreover, the Search Division considers that the present European patent application does not comply with the provisions of the European Patent Convention to such an extent that it is not possible to carry out a meaningful search into the state of the art on the basis of some of the claims; reference is made to sheet C, which is attached to the search report.

The abstract was modified by the Search Division and the definitive text is attached to the present communication.

Additional set(s) of copies of the documents cited in the European search report is (are) attached as well.

Note to users of the automatic debiting procedure:

Unless the EPO receives prior instructions to the contrary, the search fee(s) will be debited on the last day of the period for payment. For further details see the Arrangements for the automatic debiting procedure, Supplement to OJ EPO 02/1999.

REGISTERED LETTER



SUPPLEMENTARY -PARTIAL EUROPEAN SEARCH REPORT

Application Number

under Rule 46, paragraph 1 of the European Patent EP 98 94 6105 Conventi n

| | Citation f document with indic | ration, where appropriate | Relevant | CLASSIFICATION OF THE |
|---|---|--|--|------------------------|
| ategory | of relevant passage | | to claim | APPLICATION (Int.Cl.6) |
| D,X | NL. MICHAEL ET AL., : | "Defective | 1,3 | A61K38/00 |
| | accessory genes in a | human | 1 | A61K39/40 |
| | immunodeficiency viru | s type 1-infected | } | A61K39/42 |
| | long-term survivor la | cking recoverable | | A61K39/38 |
| | virus" | : | | A61K39/21 |
| | J. VIROL., | | | A61K39/12 |
| | | 1995 (1995-07), pages | | A61K39/395 |
| | 4228-4236, XP00217166 | | | C07H21/02 |
| ' [| * the whole document, | | 2,4-11, | C07H21/04 |
| l | 4235 left-column last | paragraph * | 13-20 | C07K1/00 |
| | _ | | | |
| (| KIM J J ET AL: "Deve | lopment of a | 12 | |
| | multicomponent candid | | | |
| | HIV-1" | | | <u> </u> |
| | VACCINE, GB, BUTTERWORT | H SCIENTIFIC. | | |
| | GUILDFORD, | o 1007 (1007-06-01) | | |
| l | vol. 15, no. 8, 1 Jun pages 879-883, XP0040 | e 1997 (1997-00-01), 75675 | | |
| | ISSN: 0264-410X | , 50, 5 | | |
| , | * the whole document | * | 7-11. | TECHNICAL FIELDS |
| | | | 13-20 | SEARCHED (Int.Cl.6) |
| | - | | | C07K |
| | | -/ | |] |
| | | | | |
| FACK | OF UNITY OF INVENTIO | N | <u> </u> | 1 |
| The Seam | h Division considers that the present Eur | ppean patent application does not comply | with | 1 |
| the require | ements of unity of invention and relates to | severalinventions or groups of inventions | 3, | |
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| | | | | |
| see | sheet B | | | |
| see | sheet B | | | |
| see | sheet B | | | |
| The nrese | nt nartial European search report has bee | on drawn up for those parts of the Europea | מב | |
| The nrese | | on drawn up for those parts of the Europea mentioned in the claims. Date of completion of the search | an | Examiner |
| The nrese | nt partial European search report has bee dication which relate to the invention first | mentioned in the claims. | | Examiner 1a, P |
| The prese | nt partial European search report has bee lication which relate to the invention first Place of search | Date of completion of the search 11 July 2001 T: theory or principle | Ju] | ia, P |
| The prese patent app | nt partial European search report has be blication which relate to the invention first Place of search MUNICH | Date of completion of the search 11 July 2001 T: theory or principle E: earlier patent doc | Jula a underlying the current, but pub | ia, P |
| The prese patent app C/ X : parti Y : parti | nt partial European search report has bee blication which relate to the invention first in Place of search MUNICH ATEGORY OF CITED DOCUMENTS cutarty relevant if taken alone cutarty relevant if combined with another | Date of completion of the search 11 July 2001 T: theory or principle E: earlier patent doc after the filing dat D: document cited in | Jula a underlying the sument, but publis n the application | ia, P |
| The prese patent app C/ X : parti Y : parti | nt partial European search report has bee dication which relate to the invention first in Place of search MUNICH ATEGORY OF CITED DOCUMENTS cutarly relevant if taken alone | Date of completion of the search 11 July 2001 T: theory or principle E: earlier patent doc after the filing dat D: document cited in L: document cited for | Jula a underlying the current, but public a the application or other reasons | ia, P |

1

European Patent PARTIAL EUROPEAN SEARCH REPORT

Application Number

EP 98 94 6105

| Citation of document with indication, where appropriate, of relevant passages U. WIELAND ET AL.,: "In vivo genetic | Relevant to claim | |
|---|--|--|
| | | |
| variability of the HIV-1 vif gene" VIROLOGY, vol. 203, no. 1, 15 August 1994 (1994-08-15), pages 43-51, XP000999254 | 1,3 | |
| * the whole document * | 2,4-6 | |
| T. NAGASHUNMUGAM AND HM FRIEDMAN: "Cell-free HIV-12r6 vif mutants are defective in binding to peripheral blood mononuclear cells and in internalization" DNA CELL BIOL, | 1,3,7, 12,18 | |
| vol. 15, no. 5, May 1996 (1996-05), pages 353-361, XP000999264 * the whole document * | 12-20 | TECHNICAL FIELDS SEARCHED (Int.CI.6 |
| MILLER R H ET AL: "HIV ACCESSORY PROTEINS AS THERAPEUTIC TARGETS VIRAL REGULATORY PROTEINS REPRESENT NEW TARGETS FOR THERAPEUTIC ANDPREVENTION STRATEGIES AGAINST HIV" NATURE MEDICINE, NATURE PUBLISHING, CO,US, vol. 3, no. 4, April 1997 (1997-04), pages 389-394, XP001005617 ISSN: 1078-8956 * the whole document, in particular last full-paragraph on page 393 and paraagraph bridging pages 393-394 * | 12-20 | |
| P. SOVA ET AL.,: "Conservation of an intact human immunodeficiency virus type 1 vif gene in vitro and in vivo" J. VIROL, vol. 69, no. 4, April 1995 (1995-04), pages 2557-2564, XP002171663 * the whole document * | 1,3 | |
| -/ | | |
| • | | |
| | | |
| | * the whole document * T. NAGASHUNMUGAM AND HM FRIEDMAN: "Cell-free HIV-lZr6 vif mutants are defective in binding to peripheral blood mononuclear cells and in internalization" DNA CELL BIOL, vol. 15, no. 5, May 1996 (1996-05), pages 353-361, XP000999264 * the whole document * MILLER R H ET AL: "HIV ACCESSORY PROTEINS AS THERAPEUTIC TARGETS VIRAL REGULATORY PROTEINS REPRESENT NEW TARGETS FOR THERAPEUTIC ANDPREVENTION STRATEGIES AGAINST HIV" NATURE MEDICINE, NATURE PUBLISHING, CO,US, vol. 3, no. 4, April 1997 (1997-04), pages 389-394, XP001005617 ISSN: 1078-8956 * the whole document, in particular last full-paragraph on page 393 and paraagraph bridging pages 393-394 * P. SOVA ET AL.,: "Conservation of an intact human immunodeficiency virus type 1 vif gene in vitro and in vivo" J. VIROL, vol. 69, no. 4, April 1995 (1995-04), pages 2557-2564, XP002171663 * the whole document * | * the whole document * T. NAGASHUNMUGAM AND HM FRIEDMAN: "Cell-free HIV-12r6 vif mutants are defective in binding to peripheral blood mononuclear cells and in internalization" DNA CELL BIOL, vol. 15, no. 5, May 1996 (1996-05), pages 353-361, XP000999264 * the whole document * MILLER R H ET AL: "HIV ACCESSORY PROTEINS AS THERAPEUTIC TARGETS VIRAL REGULATORY PROTEINS REPRESENT NEW TARGETS FOR THERAPEUTIC ANDPREVENTION STRATEGIES AGAINST HIV" NATURE MEDICINE, NATURE PUBLISHING, CO,US, vol. 3, no. 4, April 1997 (1997-04), pages 389-394, XP001005617 ISSN: 1078-8956 * the whole document, in particular last full-paragraph on page 393 and paraagraph bridging pages 393-394 * P. SOVA ET AL.,: "Conservation of an intact human immunodeficiency virus type 1 vif gene in vitro and in vivo" J. VIROL, vol. 69, no. 4, April 1995 (1995-04), pages 2557-2564, XP002171663 * the whole document * |

PARTIAL EUROPEAN SEARCH REPORT

Application Number

EP 98 94 6105

| | DOCUMENTS CONSIDERED TO BE RELEVANT | CLASSIFICATION OF THE APPLICATION (Int.Cl.6) | |
|----------|---|--|---|
| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | |
| X | WIELAND U ET AL: "ANTIGENIC DOMAINS OF THE HIV-1 VIF PROTEIN AS RECOGNIZED BY HUMAN SERA AND MURINE MONOCLONAL ANTIBODIES" AIDS RESEARCH AND HUMAN RETROVIRUSES, NEW YORK, NY,US, vol. 7, no. 11, November 1991 (1991-11), pages 861-867, XP001005425 ISSN: 0889-2229 * the whole document * | 12,13 | |
| X | WO 95 05851 A (VOLSKY DAVID J ;POTASH MARY JANE (US); ST LUKE S ROOSEVELT HOSPITA) 2 March 1995 (1995-03-02) * the whole document, in particular figure 5 and page 16 lines 27-34 * | | TECHNICAL FIELDS SEARCHED (Int.Ci.6) |
| P,X | V. AYYAVOO ET AL., : "Development of genetic vaccines for pathogenic genes : construction of attenuated vif DNA immunization cassettes" AIDS, vol. 11, no. 12, October 1997 (1997-10), pages 1433-1444, XP001005662 * the whole document * | 1-20 | |
| | | | |

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 98 94 6105

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for the separticulars which are merely given for the purpose of information.

11-07-2001

| Patent documer cited in search rep | it iort | Publication date | | Patent family member(s) | | Publication date |
|---------------------------------------|------------|---------------------|----|-------------------------|---|------------------|
| WO 9505851 | Α | 02-03-1995 | AU | 7568794 | A | 21-03-199 |
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